

Lawrence Berkeley National Laboratory

Transportation Demand Management Plan

June 21, 2007

Background

The Lawrence Berkeley National Laboratory (LBNL) is projected to experience moderate growth over the next twenty years. The purpose of the LBNL Transportation Demand Management (TDM) Plan is to reduce total vehicle trips to the Lab, reducing emissions as well as traffic impacts and parking demands. The strategy is to implement TDM programs that increase awareness among staff and offer incentives to access the Laboratory by means other than the use of single-occupant vehicles (SOV), including public transit, carpools and vanpools, bicycling, and walking. Besides reduced traffic, emissions, and parking demands, other benefits include improved air and environmental quality, and improved relations between the Laboratory, the City of Berkeley, UC Berkeley, and the local community.

Current Conditions

Berkeley Lab's TDM Program facilitates a range of commute options for its employees that have served to reduce commuter vehicle trips to the Lab. As of the most recent Berkeley Lab transportation study, it is estimated that approximately 52% of Laboratory staff and visitors use their personal vehicles to commute to the Laboratory (see table) – a rate of use of alternative transportation modes comparable to institutions in dense urban areas.

Table 1: Current Mode split estimates based on FY2000 employee transportation survey:

Mode	% of total	Number
Drive Alone	51.8%	2266
carpool >2x week	7.7%	336
motorcycle	2.7%	119
LBNL Shuttle	9.7%	426
LBNL Shuttle & bike	3.8%	168
Bicycle only	5.7%	248
Walk	4.3%	190
Current Transit	10.7%	469
Telecommute 2+x week	3.6%	156
Total	100.0%	4376

The Lab limits the supply of parking available to employees, currently providing spaces for approximately 50% of its Adjusted Daily Population (ADP), reflecting the high degree to which access is achieved by means other than single-occupant vehicles. There are currently 2,300 parking spaces at the Laboratory, distributed as shown in Table 2.

Table 2: Current Parking Mix

Parking Type	No. Spaces	No. Permits
Orange (employee)	32	26
Blue (employee)	309	792
General (employee)	1,552	2,523
Disabled	39	0
Emergency	3	0
Gov. Vehicle	271	0
Loading Zone	43	0
Motorcycle	23	101
Timed	11	0
Visitor	17	0
Total	2,300	3,442

Currently there are 1,932 general use parking spaces available (including spaces for the disabled) to serve an approximate ADP of 4,515. Parking at the Laboratory is free, but is allowed by permit only. Parking permits are provided to career employees and participating guests. The Laboratory has typically provided one employee parking space for each 1.7 to 2.0 staff person and user/guest that is authorized to park an automobile on the Laboratory's main hill-site during the work day. Parking spaces are provided in an array of moderate to small surface parking lots dispersed throughout the Laboratory, and along the sides of many roads. There are currently no parking structures on the main site.

Due to staff population growth and an increasing demand on user facilities, the Lab has experienced an increase in demand of 25 to 30 parking spaces a year for the last fifteen years, and this trend is expected to continue. The Lab has added approximately 650 spaces over the past 16 years. The 1987 LRDP allowed for a total of 2410 spaces, a number which has not yet been reached.

TDM Approach

The 2006 LRDP includes the projection of 500 net new parking spaces being added to the Laboratory over the next 20 years, accompanying a net Adjusted Daily Population increase of 1,010, meaning that the ratio of parking to population will be reduced. The draft EIR analysis includes mitigation measures in the TDM program which will require an additional traffic survey when the number of parking spaces at the Laboratory is increased beyond 375. It is therefore the goal of this TDM Plan to implement measures over the course of the LRDP time frame, reducing the demand for parking and maintaining a cap of 375 on net new parking spaces.

The implementation of additional commute options and other programs to encourage the use of mass transit will require increased resources, either directly in the form of expenses or indirectly in the form of staffing. This TDM Plan outlines a phased approach that takes into account the resource limitations while working toward the goal of reducing total vehicle trips to the Lab. A key task in Phase 1 is to document the effectiveness and utilization of the existing TDM program elements, establishing benchmarks and laying the foundation for implementation of new or enhanced measures.

Current TDM Measures

Berkeley Lab's current TDM program includes the following measures:

Laboratory Shuttle Service

The TDM component that has the greatest impact on Lab traffic is the Berkeley Lab Shuttle system. A system of small buses, the shuttle is offered free to Berkeley Lab employees and visitors. The shuttle has an on-site route that serves passengers within the Laboratory campus, and a number of external routes that connect the Laboratory to various locations within the City of Berkeley, including UC Berkeley, major AC Transit stops and BART stations. Stops are served generally every ten to fifteen minutes during normal working hours, Monday through Friday. The shuttle buses include racks for bicycles, so bicyclists can ride the shuttle up the hill and bicycle down. The shuttle reduces vehicle trips within the Laboratory, and provides access to the Laboratory for commuters using public transit such as BART and AC Transit.

Guaranteed Ride Home

The Lab provides a guaranteed ride home via Lab Security or taxi in case of family illness, family crisis, unscheduled overtime, or other emergencies. This encourages Lab employees to use alternative means of transportation getting to the Lab, as they can feel comfortable that in unusual or emergency situations they will be able to get home quickly. The Lab also participates in the Alameda County Guaranteed Ride Home program.

Pretax Transportation Program Incentive

Berkeley Lab offers employees participation in the "WageWorks" program, which enables Lab employees to deduct transportation costs of up to \$100 with pretax dollars. This incentive offers commuter participants a discount of up to 40% for public transportation expenses such as BART or AC Transit tickets.

Carpooling/Vanpooling

The Lab's website links employees to Rideshare, a free regional ridesharing agency. Lab employees who participate in Rideshare can also deduct voucher expenses with pre-tax dollars as part of the Pretax Transportation Program.

Telecommuting and Flex Time

The Laboratory supports telecommuting, reducing the number of daily trips to the Lab by employees. The Laboratory also allows for flexibility in work hours to reduce peak demand.

Limited Parking

Parking is limited and is regulated through the use of parking permits, thus discouraging personal vehicle use.

Clean-fuel Vehicles

The Laboratory has an ethanol fueling facility and uses bio-diesel in some fleet vehicles and buses.

Other related practices and benefits

Pedestrian Network

Berkeley Laboratory has a well developed internal system of pedestrian routes, encouraging pedestrian activity in lieu of the use of vehicles. This pedestrian network is connected to the UC Berkeley campus, the City of Berkeley, and surrounding neighborhoods, thorough a series of secure pedestrian gates. The network is lighted for security and to encourage use.

Government-owned Vehicles

The Laboratory owns and maintains a number of vehicles for Berkeley Lab business use. Employees who come to work without a personal car have access to a vehicle for short trips.

Bicycle infrastructure

Bicycling is a popular form of non-auto commuting to the Laboratory. Berkeley Lab has a well-developed infrastructure to support those who bicycle to work; specifically;

- Major Laboratory circulation routes include bike lanes.
- The Berkeley Lab shuttle accommodates bike transport.
- Bike racks are provided throughout the Laboratory.
- Showers are provided at a number of locations around the Laboratory.
- The LBNL Bicycle Coalition, a volunteer group at the Laboratory, are an organized bicycling group that encourage bicycle commuting through education and helping to improve facilities.

On-site amenities

Berkeley Lab provides many support services and amenities on-site, which reduces the number of stops during commutes and trips of people leaving the Laboratory to perform errands, including:

- ATM
- Cafeteria
- Guest housing (under development)
- Dental
- Employee activities, including recreation programs and facilities

Information and Marketing

Berkeley Lab provides information to employees about TDM programs and services through the following venues:

- Laboratory Newspaper “the View,” and e-news “Today at Berkeley Lab”
- Comprehensive pedestrian and bicycling maps
- Bulletin board displays
- E-mail bulletins
- Transit and access information in new employee orientation and Laboratory visitor packets
- Transportation fair
- Promotional events
- Employee advisory committee
- Spare the Air Campaign notifications

Phased Implementation of Expanded TDM Measures

Through a series of internal planning meetings as well as community meetings, a number of possible new TDM measures have been identified. Many require additional study to determine the cost and the TDM benefit before they can be implemented. This Transportation Demand Management Plan will be implemented in three phases as follows:

- **Phase 1:** Initial TDM Planning (commencing October 2007, FY08)
- **Phase 2:** Feasibility Analyses of Additional TDM measures (FY09)
- **Phase 3:** Feasibility of TDM Measures Requiring Significant Capital Expense (triggered by reaching 2,675 parking spaces – an increase of 375 parking spaces over the base 2006 inventory of 2300.)

Phase 1: Initial TDM Planning

The Lab will proceed with an initial planning phase which will examine more closely some of the key aspects of managing transportation demand. In Phase 1, staffing will be established to handle the tasks and benchmarks will be set for meeting the goals of the TDM Plan. The Phase 1 tasks are as follows:

LBNL TDM Coordinator

Identify resource for a “TDM Coordinator” or “TDM Manager” who will monitor, plan, and implement TDM measures in coordination with the departments overseeing parking and access. This resource will oversee studies evaluating the cost and benefits of further TDM measures.

LBNL Transportation Committee

Form a committee to develop and implement TDM measures in conjunction with the TDM Coordinator position.

Commuter Surveys and TDM Measure Cost Studies

Conduct commuter survey similar to the one conducted in 2000 to determine the commute patterns of employees and to identify transportation modes that can be improved and to establish a baseline for measuring improvement. Conduct studies that compare the costs of implementation of additional TDM measures vs. the cost of building parking structures.

Parking Management Study

Conduct an annual inventory of on-site parking spaces and track the number of net new spaces. Review the inventory of parking permits to re-assess the guidelines regarding the issuance of parking permits.

Commuter Outreach

Conduct information and outreach program to aggressively promote the use of alternatives to the single-occupant commuter vehicle, to encourage employees to take advantage of the commute options currently available to them (e.g. carpooling, guaranteed ride home, “WageWorks”). Make information on mass transit alternatives more readily available to employees and guests, using quarterly e-news and employee newspaper articles describing efficient alternatives and their outcomes of reduced traffic and preserved air quality benefits

Contractor Delivery and Construction Traffic

Develop standardized contract specification information required in procurement / purchasing contracts to discourage or prohibit deliveries during commute hours, when these contracts involve delivery of goods to the Lab's site. The Lab will work with the City of Berkeley Transportation and Public Works to review and approve truck routes and the Construction Traffic Management Plans.

Bicycle Infrastructure

Expand bicycle racks at buildings and on Berkeley Lab shuttle buses to meet the increased number of bicycle commuters.

Parking Fee at Leased Buildings

Investigate the applicability of the Parking Cash-Out program (AB2109), an employer funded program in the leased facilities.

Phase 2: Feasibility Analyses of Additional TDM measures

Based on surveys and studies conducted in Phase 1, in Phase 2 the Lab will conduct more detailed feasibility analyses on the implementation of additional TDM measures, examining cost of implementation and associated benefits. It is likely that the studies will focus on these areas:

Traffic Studies

Perform periodic gate count and a commuter survey to more accurately profile the transportation modes used by Berkeley Lab commuters. Study service vehicle traffic to determine number of trips and vehicle modes of service and delivery vehicles. In conjunction with the City of Berkeley, monitor key intersections for traffic and pedestrian activity (Heast/Gayley and Gayley at Stadium Rimway) to assess impacts during Laboratory growth.

Parking Fee at the Lab

Currently there is no fee for parking at the Laboratory, although permits are controlled and limited. The Lab is a Department of Energy (DOE) facility, and there may be DOE directives regarding parking fees that must be more fully explored and discussed with DOE and UC. A study will be conducted on parking fees, legal constraints, and potential fee structures.

Shuttle Coordination Plan

In cooperation with UC Berkeley, Alta Bates Hospital, Bayer Corporation and the West Berkeley Shuttle (all of whom operate shuttles), assess the feasibility of developing coordinated shuttle scheduling, thus reducing transportation related impacts in the area.

Car Share

Investigate the use of Car Share service in addition to, or in lieu of, government-owned fleet vehicles, either outsourced or managed in-house, possibly using an on-line reservation system. This service would provide automobile rental by the hour; employees may be more inclined to use mass transit if they had the option of an available automobile for personal errands during the day.

Enhanced Pretax Transportation Program

Review similar programs at nearby institutions and assess the feasibility of improving or enhancing the "WageWorks" program already in place.

Enhanced Carpool/Vanpool

Assess the costs of providing additional incentives to further encourage carpools and vanpools. Create a more coordinated and visible program for carpooling and vanpooling and offer additional incentives. Dedicate preferential parking spaces to carpools and vanpools, encouraging their use.

Alternative Fuels Program

Implement the use of alternative fuels such as biodiesel in the shuttle fleet and in government-owned Laboratory vehicles. Encourage and reward the use of alternative fuel vehicles in carpools and vanpools. Mandate the use of alternative fuel vehicles in contractor and construction vehicles.

Additional On-Site Amenities

Identify and develop feasibility of additional support services and amenities, to further reduce the number of stops during commutes and trips of people leaving the Laboratory to perform errands, such as:

- Child care
- Dry cleaning pick-up
- Gym

Phase 3: Feasibility of TDM Measures Requiring Significant Capital Expense

It is anticipated that the implementation of TDM measures in Phases 1 and 2 will sufficiently control the transportation and traffic impacts. If it is necessary to add more than 375 spaces to the Berkeley Lab main site within the time frame of the 2006 LRDP, the Lab will consider additional options to ease traffic impacts. The following measures will be considered:

BART Bicycle Storage

Work with BART to provide additional bicycle storage lockers at BART stations impacted by Berkeley Lab commuters.

Remote Parking

Create or lease remote parking locations that could be serviced by the Berkeley Lab Shuttle in order to reduce on-site traffic and parking as well as traffic impacts in surrounding communities.

Discount Group Pass Program

Investigate the costs of a mass transit group pass program, a mass-transit deep discount group pass that would allow unlimited usage of regional mass transit systems, including both AC Transit and BART; modeled on the UC Berkeley BearPass (offered to UCB staff and faculty), the UC Berkeley ClassPass (offered to UCB students) or the City of Berkeley's EcoPass program (offered free to all City employees).

Critical Intersection Shared Funding

Investigate shared funding and prepare a plan for improving critical off-site intersections with funding shared among the Lab, other major institutions, and local jurisdictions (e.g. City of Berkeley, UC Berkeley, and LBNL).

Funicular Railway

Explore the feasibility of a funicular railway on site similar to the Angel's Flight system in Los Angeles as suggested by the Sierra Club in the Draft LRDP EIR review as another transportation option that would encourage employees to use mass transit to commute to work.

Preparation of Updated Traffic Analysis

In addition to the TDM measures identified above, Berkeley Lab intends to prepare an updated traffic analysis pursuant to a "reopener" negotiated with the City of Berkeley to evaluate traffic impacts related to future development at the Lab. The updated traffic analysis will be prepared on the earliest to occur of ten years from the date that Berkeley Lab's Long Range Development Plan EIR is certified or the date upon which development at the Lab pursuant to the Long Range Development Plan reaches 375 net new parking spaces. When the earliest of these thresholds is reached, Berkeley Lab will conduct the new traffic study, circulate that traffic study for review subject to the California Environmental Quality Act, and consider whether further mitigation measures or modifications to the Long Range Development Plan should be adopted based upon that traffic study. The new traffic study may be conducted as part of a further project review or independently as a supplement to the Long Range Development Plan EIR. Consistent with this TDM Plan, it is anticipated that the new traffic study will assist in reducing total vehicle trips to and within Berkeley Lab, reducing air emissions, traffic impacts, and parking demands.